Pirates of the Yellow Sea: Who They Are and Why They Engage in Piracy

Ian Milden

Since December of 2015, the International Maritime Organization (IMO) and the International Maritime Bureau (IMB) have received reports of piracy in the Yellow Sea. This article argues that the pirates in the reports from the IMO and IMB are Chinese fishermen. They are engaging in piracy due to northeastern China's poor economy, the Chinese Government's fishing policies, environmental degradation, and South Korea's crackdown on illegal fishing. The four underlying causes demonstrate the pirates' importance. It also discusses the limited information on these acts of piracy as well as the things that we still do not know about the pirates and their attacks such as the frequency of the attacks. This article highlights some of the limitations to obtaining information about these pirates and their attacks. The article suggests policy options that China can use to eradicate piracy in the Yellow Sea. There are no previous peer-reviewed articles on this topic.

Introduction

When people think of maritime piracy and China, they are most likely to think of pirates from centuries ago. However, piracy is a modern problem that threatens international shipping which China has a large stake in. While the People's Republic of China has been engaged in international efforts to combat piracy, it has largely neglected a case of piracy developing in its own backyard. This article will examine piracy in the Yellow Sea that has occurred since 2015 to understand who the pirates are and why they are engaging in piracy. This article will also discuss other known pieces of information about these pirates and some of the challenges in studying this case of piracy.

Examining Piracy in Chinese Law: Highlighting Problems

Defining piracy in regard to China is the first major challenge in studying China's responses to maritime piracy because "China does not have specialized domestic laws against piracy." (Chi 2012, 27). Since China does not have specialized domestic anti-piracy laws, "Chinese law neither expressly criminalizes piracy, nor provides a clear definition of piracy." (Chi 2012, 28). This makes it impossible for China to prosecute pirates on charges of piracy.

The Chinese legal system gets around this by punishing pirates in the same way "as other forms of crimes." (Chi 2012, 28). For example, when twelve Chinese men and one Indonesian man were executed for hijacking a ship in the South China Sea and murdering the crew, they were executed after being "convicted of murder and robbery" (Gittings 2000). While this may be effective punishment, it asserts that Chinese domestic laws for crimes such as robbery and murder apply over international waters. A domestic piracy law would be more appropriate because "the crime of piracy is subject to universal jurisdiction" (Chi 2012, 30).

It is also problematic for researchers because it forces them to sift through cases

Ian Milden graduated from Western Kentucky University Summa Cum Laude with a double major in History and Political Science. After graduation, he will pursue a Master's Degree in Public Administration also at Western Kentucky University.

of robbery, murder, and other crimes related to piracy in order to find cases of piracy. Not prosecuting pirates under an anti-piracy law also makes it difficult to determine how frequently piracy is committed near China and how frequently pirates are prosecuted.

People who are convicted of crimes such as murder get the death penalty in China. China says that death penalty cases are a state secret and does not release statistics about executions (Gittings 2000). Some cases are reported individually and "often only in the local press," which may be one way to attempt to track piracy cases (Gittings 2000). However, using this method would be difficult, time-consuming, and lead to an incomplete picture of the problem. Using this method would also assume that archived versions of local newspapers would be made available, which may not be the case since China has an authoritarian government.

There are a few possible explanations as to why China does not have a modern anti-piracy law. One possible explanation is that China does not want to criminalize its activities in intellectual piracy. However, a law could be made to expressly define piracy as maritime piracy which avoids intellectual piracy altogether. Another explanation suggests that piracy in Chinese waters is viewed as a problem from the past, and lawmakers may not see a need for a modern domestic anti-piracy law. Even if the Chinese Government holds this view, it clearly sees international piracy as a problem. China ratified the UN Convention on the Law of the Sea (hereafter UNCLOS) in 1996 which means it has an international responsibility to combat piracy. (Chi 2012, 24). The Chinese Government may see UNCLOS and other portions of international law as adequate for dealing with international piracy. However, UNCLOS "is based on the presumption that states have or will enact adequate domestic anti-piracy legislation" (Chi 2013, 116). China needs to update its piracy laws in order to more effectively be in compliance with international treaties and conventions on combatting piracy.

DEFINING PIRACY AND EVALUATING SOURCES

This article examines piracy in the Yellow Sea, a case which is in China's proximity. In order to evaluate piracy in the Yellow Sea, a definition of piracy is needed that clearly defines what cases are worthy of examination. Chinese law does not provide a definition of piracy, and UNCLOS is not applicable to acts of piracy that occur within territorial waters. Territorial waters were carved out of the UNCLOS definition to protect state sovereignty (IMB 2016). Since much of the Yellow Sea is territorial waters, it does not make sense to use the definition of piracy in UNCLOS. For the purposes of this case study of pirates in the Yellow Sea, piracy shall be defined as acts or attempted acts of robbery aboard ships by people who were not supposed to be on the ship. This includes unauthorized boarding of a ship and attempted unauthorized boarding of a ship with the likely intent of committing robbery.

The only sources of information on these pirates appear to be piracy reports from the International Maritime Organization (hereafter IMO), which is an office in the United Nations, and the International Maritime Bureau (hereafter IMB), which is an office in the International Chamber of Commerce. These re-

ports typically include the name of the ship attacked, the country the ship was registered to, the location of the attack, the date of the attack, and a brief description. Some reports lack some of these details. In some cases, there was either a request to withhold information or the information simply was not provided. The IMO and IMB are completely dependent on others reporting these incidents to them.

Further complicating the use of these sources is that the IMO and IMB data does not always match. In fact, the number of reports in a given year and how they are categorized do not match. The data from incident to incident also does not perfectly match. Discrepancies often revolve around the description and the presence or absence of data. To illustrate how this can be problematic, an incident that occurred in Yangzhou in 2016 can be used. Enough of the data such as the date, March 27th, and the name of the ship, SBI *Athena* of the Marshall Islands, matches that it is certainly the same incident. According to the description in the IMB's annual piracy report for 2016, "Robbers disguised as stevedores boarded the berthed ship during cargo operations and escaped with the ship's properties" (IMB 2017). The IMO's report for the month of March of 2016 said, "Duty Officer on security patrol at Yangzhou Conch terminal for loading operation discovered five fire nozzles from the fire-boxes had been stolen" (IMO 2016).

Further problematic with this particular incident is the details on the location. The IMB report just lists "Yangzhou Conch Terminal, China" as the location of the incident with no GPS coordinates, which are listed for many other incidents (IMB 2017). The IMO monthly report lists the location of the incident as "Yellow Sea" and "Yangzhou, China" and provides GPS coordinates of "310, 16' N, 1190, 25 E" (IMO 2016). Those coordinates are for a location that is not in the Yellow Sea. The coordinates are south and west of the Yellow Sea in the municipality of Yangzhou. At the bottom of the IMB's annual piracy report, there is a map which has pinpoints for the locations of all the incidents and there is one that appears to be approximately where the city of Yangzhou is suggesting that the IMO's label of this incident being in the Yellow Sea is incorrect (IMB 2017). The coordinates lead to a farmhouse near a lake in Jiangsu Province which suggests that this is more likely a case of robbery or petty theft rather than piracy ("Google Maps latitude and longitude of an address" 2018).

While these issues prevent us from gaining a coherent narrative of events, we can still rely on these sources for studying these pirates. Basic details that are easier to verify often match between the IMO and IMB. These details include the date, name of the ship, approximate location, and results of the attack. The parent organizations of the IMO and IMB, which are the United Nations and the International Chamber of Commerce respectively, are widely cited in credible research. The IMB's Piracy Reporting Center also coordinates with law enforcement and ship captains to track piracy data, warn crews of threats, and help apprehend pirates (IMB 2017).

The IMB is hamstrung by its dependence upon the ships and governments to report incidents of piracy to them. Both have incentives to not report incidents of piracy. Shipping companies are concerned about spikes in insurance premiums. For example, the premium for a single transit through the Gulf of Aden

went "from $500 to as much as $20,000" as pirate attacks spiked off the coast of Somalia in the late 2000s (Kraska and Wilson 2008, 43). Not reporting incidents of piracy keeps insurance premiums low and allow companies to build piracy into their operating costs. Reports of piracy would also force shipping companies to hire private security firms which also increases the cost of shipping.

The Chinese Government might not want to report piracy to avoid scaring shipping companies away from ports that are vital to its economy. The Port of Tianjin, which has been the location for four attacks, is one of China's largest ports and is the closest to Beijing, according to China Daily, the English language newspaper of the Chinese Government ("About Tianjin Port" 2013). Reports of piracy could deter shipping to affected port areas and raise the price of goods to account for new costs created by piracy. Since both the Chinese Government and the shipping companies have reasons not to report, piracy in the Yellow Sea is likely underreported.

If the incident in Yangzhou is not counted, there have been seventeen reported incidents of piracy in the Yellow Sea between the start of 2015 and the end of the first quarter of 2019 according to the IMB. Identifying who the pirates are would help determine their motivations, but the reports from the IMB simply just describe the pirates as men with no other physical descriptions. There is also no information in these reports to determine whether any of these pirates were arrested by the Chinese authorities. Even if a pirate was arrested by the Chinese authorities, the public would not be guaranteed any information.

WHO ARE THE PIRATES?

There is enough information to guess that the identities of the pirates are most likely Chinese fishermen. The most telling piece of information is an incident in 2015 where pirates "in a wooden fishing boat" boarded the bulk carrier Alpha Era. (IMB 2016). This attack was an anomaly because the report specified the attacking boat was a fishing boat, the attackers were reported to be armed with knives, and there were eight pirates involved which is a larger number than any other attack. However, there are other reasons to believe that fishermen are the most likely people committing acts of piracy in the Yellow Sea. When boats used by the pirates are described in the reports, there are usually described as "small" or "wooden" which is not inconsistent with a description of a fishing boat (IMB 2018). Fishermen also have the most logical reason to be out at sea since their livelihood depends on it.

Another indicator that fishermen are responsible is the timing of the attacks. The attacks occur only in the winter and early spring, disproportionately occurring in December, which suggests that piracy is a part-time endeavor for the pirates. A partial explanation for the timing of the attacks can result from a summer fishing ban which China imposed to replenish fish stocks (Xinhua News Agency 2012). China maintains that fishing bans are effective policy and is blacklisting fishermen for fishing violations with the goal of reducing the number of fishing vessels (Wang 2017). A summer

fishing ban deters boats from going out as fishermen may not see it as a worthwhile expense if their ship runs on fuel or worth potential trouble with the government.

The locations of the attacks are also closer to China than the Korean Peninsula which suggests that the pirates are most likely Chinese. All of the attacks are closer to a Chinese port than a North Korean port and are listed in IMB reports by the closest Chinese port. If the pirates were North Koreans, there would likely be attacks closer to the Korean Peninsula as well as attacks in the Sea of Japan, but there have been none reported in those areas.

Another reason why the pirates are most likely fishermen is that the people who turn to piracy tend to be people who have experience on boats. In Marcus Rediker's study of the social world of Anglo-American pirates, Rediker notes that almost all the people who were Anglo-American pirates in the early 1700s had previously been "merchant seamen, Royal Navy sailors, or privateersmen" (Rediker 2001, 140). These were all people who had the strength, experience, and expertise to operate a ship. While modern technology has made it easier to use a boat and to travel faster, there is nothing to indicate that the ships being used by pirates in the Yellow Sea have this technology. The descriptions of wooden boats reinforce the idea that these boats are most likely sailing ships or rowboats and require that strength and expertise. (IMB 2018). China had 370,000 registered fishing boats without an engine in 2015 which was 35% of the registered fishing vessels ("FAO Fisheries &Aquaculture-Country Profile: People's Republic of China" 2017). Fishermen would have the expertise to operate such boats while unemployed miners and factory workers would not.

The fishermen have also shown a willingness to use violence in a manner that is not inconsistent with the reports of the pirates. On December 12th, 2011, a Chinese fisherman who was illegally fishing in Korean waters fatally stabbed a member of the Korean Coast Guard (Kim 2012, 456). Chinese fishermen have had other violent clashes with the Korean Coast Guard where they have used "axes, shovels, and steel pipes" (Kim 2012, 469). In a piracy attack on January 11th, 2019, the two pirates were reported to the IMB as being armed with a "steel bar" (IMB 2019). While most of the Yellow Sea piracy reports do not list any weapons, the IMO only tracks firearms, knives, and rocket-propelled grenades which are weapons not in the possession of the pirates or fishermen (IMO 2017). The use of these weapons also suggests that the fishermen are poor and are using the weapons that are most readily available to them rather than purchasing them.

Economic conditions and policies appear to play a major role in piracy in the Yellow Sea. The use of wooden fishing boats indicates that these pirates do not have a lot of financial resources to draw upon and need good results from their fishing in order to survive (IMB 2018). China's northeastern regions, which border the Yellow Sea, have not been performing well economically in recent years when compared with the rest of the country. The economy of the Liaoning region, which is on the border of the Yellow Sea and North Korea, only grew by 2.1% in the first half of 2017, which is much worse when compared to the national growth

rate of 6.9%. These numbers may not be accurate as Chinese Government officials have put out fraudulent economic statistics and revised them later ("Liaoning Worst Performer as Northeast Lags Behind China's Growth" 2017). The official unemployment rate in Liaoning was 7% in 2016, but people have criticized that number as an underestimate ("China Unveils Urban Survey Unemployment Rate" 2018).

Changing policies regarding the fishing industry have also provided motivation for piracy. New policies from the Chinese Government attempt to limit overfishing and illegal fishing with the goal of improving the quality and profitability of fishing ("FAO Fisheries & Aquaculture - Country Profile: People's Republic of China" 2017). However, these policy changes have pushed people out of their jobs in the fishing industry. Between 2013 and 2014, 140,375 people lost their jobs in the fishing industry. ("FAO Fisheries & Aquaculture - Country Profile: People's Republic of China" 2017). That number equated to approximately 1% of the jobs in China's fishing industry.

Environmental degradation has killed off fish in waters near China, which restricts options for unemployed fishermen ("FAO Fisheries & Aquaculture - Country Profile: People's Republic of China" 2017). Many Chinese fishermen have tried illegally fishing in Korean waters, which are not as polluted, at the risk of being arrested by the Korean Coast Guard. Between 2002 and 2011, 4,175 Chinese fishing boats were detained by the Korean Coast Guard for illegal fishing. In the same time period, only two Korean fishing vessels were detained by the Chinese authorities for illegal fishing. The South Korean Government has taken measures to crack down on illegal fishing by imposing heavy fines, sending out more patrols, and arresting fishing crews instead of simply detaining them. Policy changes resulted in encounters between the Korean Coast Guard and Chinese fishermen that have become increasingly violent. The fishermen arrested by the South Korean authorities lose the fish they caught, and are punished by China by being banned from fishing and losing fuel subsidies (Kim 2012, 466–470).

If the economic, political and environmental restrictions on fishing get tighter, that may encourage more acts of piracy and create more dangerous pirates. Chinese fishermen have cooperated with each other when confronted by the Korean Coast Guard, going as far as to chain their ships together in conflicts. The Chinese fishermen have also shown an ability to adapt to the tactics used by the Korean Coast Guard by using steel fences and spears to prevent boarding by the Korean Coast Guard (Kim 2012, 468–469). There is no reason to think that they would not be violent with their targets or the Chinese authorities if fishing restrictions are tight enough to prevent them from having an effective way to make a living.

ATTACK TARGETS

Of the seventeen ships attacked, thirteen of them were bulk carriers. However, only two of the pirate attacks successfully got away with the ships' stores which indicates that the cargo is not the target in most cases. Fuel was stolen more than twice as often as the stores on the ship. Fuel was likely targeted because a pirate knows that a commercial ship likely has it, and it is less noticeable if a pirate

uses it for himself or sells it for profit. Fuel may also be targeted as a way to replace a potentially lost fuel subsidy for an earlier legal infraction. Some of the pirates who steal fuel manage to get away without being noticed until they are gone (IMB 2017). The targeting of fuel indicates that these pirates are opportunistic in their approach, meaning that they engage in piracy when it is convenient.

Another thing that suggests that the pirates are opportunistic is the status of the ship when it was attacked. All of the ships that were attacked are either anchored close to shore or docked at a port. Anchored and docked ships are not moving, which makes them easier to plan an attack on and board. The attacks might be occurring at night as that would be a logical time for ships to be at anchor and for the crew to be less alert. The locations of the attacks are in the port area or within China's territorial waters which makes a night attack from a pirate onshore viable. Night attacks are also more difficult to decreased visibility. However, there is no data on the piracy reports indicating what time of day these attacks occurred.

The ships attacked are registered mostly in countries that lack powerful navies. The countries of registration for the ships attacked include Panama, Liberia, The Marshall Islands, Malta, Singapore, Japan, and the Isle of Man. While an argument could be made that the pirates are just targeting ships from militarily weak states, that does not explain the attack on the Japanese Ore Carrier. The attack on the Japanese Ore Carrier is an exception when compared to the other countries of registration, but a more likely explanation exists to counter that theory.

The ships attacked may simply be using "flags of convenience." Flags of convenience are states that allow ships to register as being from that country for a revenue source. Using a flag of convenience allows a ship owner to take advantage of the country's limited or non-existent regulations and oversight, avoid taxes, and allow for the hiring of cheap labor from anywhere in the world ("Why so many shipowners find Panama's flag convenient" 2014). They tend to be found in small states with maritime borders, small navies, and a need for revenue. Flags of convenience also obscure the identity of the owner making it difficult to determine whether the ship's owner affects the likelihood of it getting attacked. The diversity in countries among the ships attacked suggests that the ship's country of registration plays no role and that the piracy in the Yellow Sea is opportunistic rather than politically motivated.

The use of flags of convenience may also discourage China from acting against these pirates. States with flags of convenience do not prioritize the regulation and safety of their ships which attracts ships to their registries. ("Why so many shipowners find Panama's flag convenient" 2014). States that have flags of convenience are not naval or diplomatic powers, so they do not have the resources to devote to this problem.

China's Response to the Pirates and Potential Policy Options

There is currently no indication that the Chinese Government has done anything in response to the pirates. It is also possible that they may not be aware of the problem. The lack of media coverage on these pirates, in addition to the small number

of reported attacks, likely contributes to the problem remaining unaddressed. The limited amount media coverage indicates that the acts of piracy in the Yellow Sea are not a high concern for the Chinese Government. The Chinese Government should be concerned about these incidents of piracy in the Yellow Sea not only because of its proximity to China but also because it signifies larger problems in the region's economic and fishing policies. Until the Chinese Government successfully addresses the problems with the policies in the region, sailors should remain vigilant and well-trained in the ship's emergency procedures to deter piracy in the Yellow Sea.

If the Chinese Government did become interested in deterring piracy while it fixes its policies, there are a few steps that it could take. Patrols in the Yellow Sea, along with watchmen in the ports, would help deter piracy because the pirates in the Yellow Sea seem to avoid confrontation. Hiring watchmen to patrol the ports and the Yellow Sea could also provide jobs for those struggling economically or who have recently become unemployed. Hiring unemployed fishermen as watchmen could also deter them from partaking in piracy, as long as they are sufficiently compensated. If they are attacking at night, boats with lights and that can sound an alarm would help deter piracy.

Military patrols in the Yellow Sea are probably unnecessary to combat piracy due to the lack of confirmed pirates with weapons. Military patrols could agitate fishermen and others living in northeastern China as it may be seen as unnecessary or in the case of the fishermen, interfering with their livelihoods which could encourage piracy. Military patrols are also likely a more expensive option when compared to other policy options.

If a pirate is captured, harsh punishment is not advisable as that may inflame tensions in the region, especially if piracy is more widespread than the reported numbers indicate. If piracy is more widespread than the reports suggest, it could indicate that the pirates have some level of popular support within the regions bordering the Yellow Sea.

Another option to deter piracy is a program to subsidize fishermen. A fuel subsidy already exists on a heavily restricted basis, so this policy option consists of expanding access to it or creating new subsidies. This would allow them to continue to work while deterring them from committing acts of piracy for supplemental income. A subsidy program would also give the government more information about the region's fishing industry as it would allow for the creation of a registry of those receiving subsidies from the government. A three strike rule may be a better policy than taking away fuel subsidies after the first infraction.

An environmental cleanup program would also be beneficial. An environmental cleanup program could create jobs with the actual cleanup and management. An improved environment would also allow more fish to thrive in the Chinese waters of the Yellow Sea making it less necessary for Chinese fishermen to try fishing illegally in Korean waters or to engage in piracy. This would also help the profits of the fishing industry with the increased numbers of fish as well as having healthier fish to catch.

Loosening restrictions on overfishing and illegal fishing in Chinese waters could also help deter piracy. Looser restrictions could allow for a less dangerous outlet for unemployed fishermen to make a living. While overfishing and illegal fishing

would still be issues, it would likely prevent the piracy problem from worsening. Policy adjustments can be made later to combat overfishing and illegal fishing, but they must better account for the economic situations of the people affected by the policy changes.

The use of one or more of these options needs to be paired with investments into the economy of northeastern China if China is serious about ending piracy in the Yellow Sea. Long-term economic investment into northeastern China is necessary as that can provide pirates and would-be pirates with other options that are safer and more economically profitable than piracy. Changes in fishing policy also need to account for the individual people affected by them and cannot leave people economically stranded.

IMPLICATIONS

The pirates of the Yellow Sea do not present a major threat to shipping at the moment. They have succeeded in a little more than half of their attacks, and only a small number have been reported. Losses incurred from successful attacks appear to be limited. These pirates are important not for what they have done so far, but why they have done what they have done. Their reasons for engaging in piracy can be summed up as desperation. The poor economic performance of the region, combined with harmful economic policies and environmental degradation, create an image of economic strangulation and desperation within the communities of northeastern China. Piracy is a symptom of these underlying causes. If these underlying conditions worsen, the number of attacks and the costs will increase. In order to avoid this outcome, the Chinese Government must act to address the underlying causes of piracy in the Yellow Sea.

APPENDIX A: PIRACY IN CHINA SINCE 2015 AS REPORTED BY THE IMO AND IMB

Year	Yellow Sea: IMO	Yellow Sea: IMB	China: IMB
2019 (1st Quarter)	N/A	3	3
2018	N/A	3	3
2017	1	2	2
2016	7	6	7
2015	4	3	3
2014	0	0	0
2013	0	0	0
2012	0	0	1

Note: The IMO listed two incidents in 2012 under "Far East." Based upon a comparison to the IMB reports, one incident occurred in China, but not in the Yellow Sea. I could not find the other incident within the IMB reports. The IMO has not released any reports since September of 2017.

Data Sources: IMO and IMB Piracy Annual Reports 2012–2016, IMB Annual Piracy Reports for 2017–2018, IMO Monthly Report for February of 2017, IMB First Quarter Report. Created by Author.

APPENDIX B: PIRATE ATTACK TARGET DATA

Country of Registration	2012	2013	2014	2015	2016	2017	2018	2019	Total
Panama	0	0	0	1	0	1	1	0	3
Liberia	0	0	0	0	0	0	2	0	2
Malta	0	0	0	1	1	1	0	0	3
Singapore	0	0	0	1	1	0	0	1	3
Marshall Islands	0	0	0	0	2	0	0	0	2
Japan	0	0	0	0	1	0	0	0	1
Isle of Man	0	0	0	0	1	0	0	0	1
Hong Kong	0	0	0	0	0	0	0	2	2
Type of Ship									
Bulk Carrier	0	0	0	2	4	2	3		11
Oil Tanker	0	0	0	0	1	0	0		1
Ore Carrier	0	0	0	1	1	0	0		2
Results									
Failed Boarding	0	0	0	0	0	0	2		2
Boarded without theft	0	0	0	2	1	1	0		4
Theft of Fuel	0	0	0	1	3	0	1		5
Theft of Stores	0	0	0	0	2	0	0		2
Theft (item not clear)	0	0	0	0	0	1	0		1
Success	0	0	0	1	5	1	1		8
Failure	0	0	0	2	1	1	2		6
Total	0	0	0	3	6	2	3		14

Data Sources: IMB Annual Piracy Reports 2012–2018, IMB 2019 First Quarter Report. Created by Author

APPENDIX C: DETAILS OF PIRACY INCIDENTS IN THE YELLOW SEA

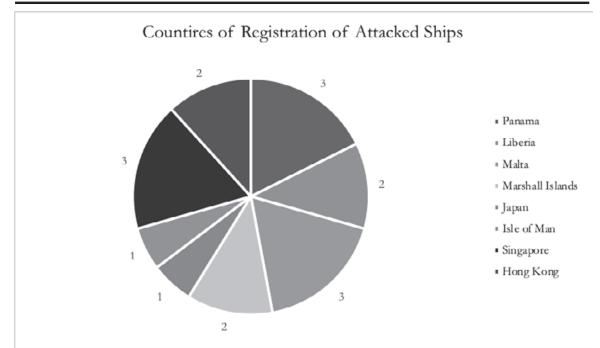| Based on IMO datasets	2015 (IMO)	2016 (IMO)	2017 (IMB)	2018 (IMB)	2019 (IMB)
Total Number of Incidents Reported	3	7	2	3	3
Location					
In Port	0	5	0	3	3
In Territorial Waters	3	2	2	0	0
In International Waters	0	0	0	0	0
Uncertain	0	0	0	0	0
Ship Status					
Moving	0	0	0	0	0
Anchored	3	6	2	3	3
Not Stated	0	1	0	0	0
Number of People involved					
1-4 people	1	3	2	2	3
5-10 people	1	0	0	0	0
More than 10 people	0	0	0	0	0
Not Reported/Unknown	1	4	0	1	0
Consequences					
Consequences to Crew	0	0	0	0	0
Consequences to Cargo	0	0	1	0	1
No Reported Consequences	3	7	1	3	2
Weapons used					
Guns	0	0	0	0	0
Knives	1	0	0	0	0
Other	0	0	0	0	1
None Reported	2	7	2	3	2
Area Boarded					
Crew Accommodations	0	0	0	0	0
Cargo Area	0	3	0	0	0
Store Rooms	1	0	0	0	0
Engine Room	0	0	0	1	0
Main Deck	0	4	1	0	0
Boarding Failure	2	0	0	2	0
Other/Not Clearly Reported	0	0	1	0	3
Deaths	0	0	0	0	0
Hostages Taken	0	0	0	0	0

Data Sources: IMO Annual Piracy reports 2015–2016, IMB Annual Piracy Reports 2017–2018, IMB First Quarter Report for 2019. Created by Author
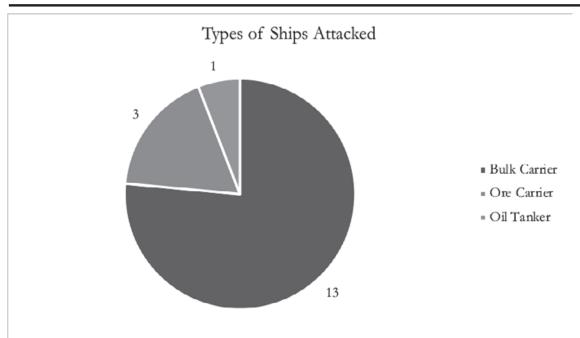
APPENDIX D: ATTACK LOCATION DATA

Location	2012	2013	2014	2015	2016	2017	2018	2019	Total
Caofedian Anchorage (Yellow Sea)	0	0	0	1	0	1	2	2	6
Longkou (Yellow Sea)	0	0	0	0	1	0	0	0	1
Tianjin Port (Yellow Sea)	0	0	0	2	1	0	1	0	4
Rizhao Port, Shandong (Yellow Sea)	0	0	0	0	1	0	0	0	1
Qinhuangdao (Yellow Sea)	0	0	0	0	1	0	0	0	1
Tangshan (Yellow Sea)	0	0	0	0	2	1	0	0	3
Jintang Anchorage (Yellow Sea)	0	0	0	0	0	0	0	1	1
Nantong (East China Sea)	1	0	0	0	0	0	0	0	1
Yangzhou (Central Coast)	0	0	0	0	1	0	0	0	1

Data Sources: IMB Annual Piracy Reports 2012–2018, IMB First Quarter Report for 2019. Created by Author

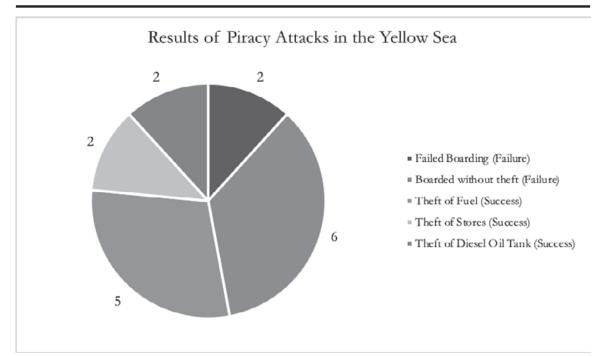**Appendix E: Countries of Registration of Attacked Ships in the Yellow Sea**

Data Sources: IMB Annual Piracy Reports 2015–2018, IMB First Quarter Report for 2019. Created by Author.
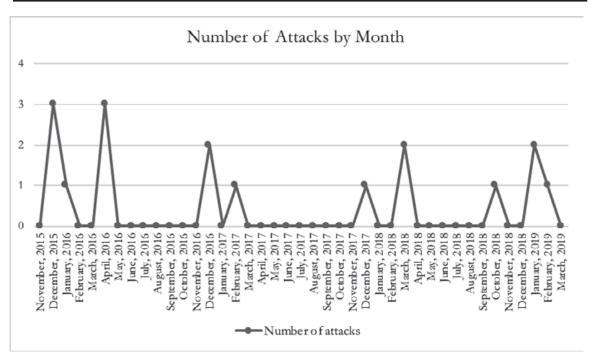
Appendix F: Types of Ships Attacked in the Yellow Sea

Data Sources: IMB Annual Piracy Reports 2015–2018, IMB First Quarter Report for 2019. Created by Author.

Appendix G: Results of Piracy Attacks in the Yellow Sea

Data Sources: IMB Annual Piracy Reports 2015–2018, IMB First Quarter Report for 2019. Created by Author.

Appendix H: Number of Attacks by Month

Data Sources: IMB Annual Piracy Reports 2015–2018, IMB First Quarter Report for 2019. Created by Author.

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